Introduction to Analog Circuits
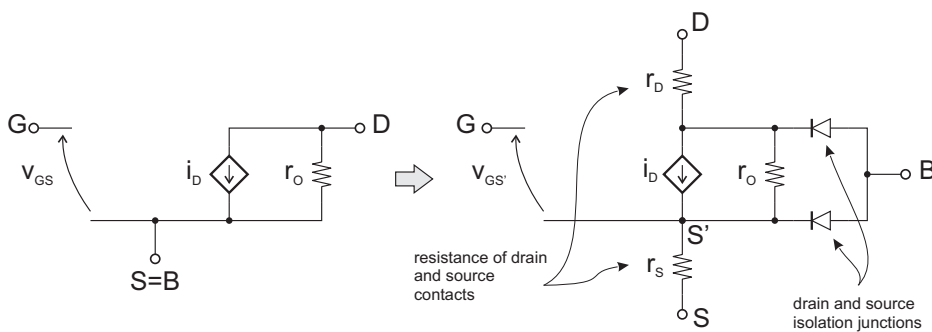# (Errata Corrige)

February 2010

- pag. 10: the following expression

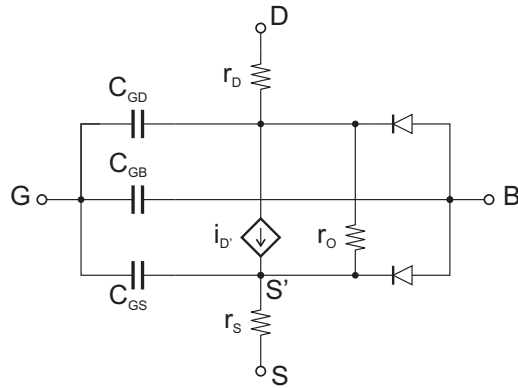$$r_o \triangleq \left.\frac{\partial i_D}{\partial v_{DS}}\right|_{v_{GS}=const.} = \frac{1}{\lambda i_D}.$$

should be replaced with

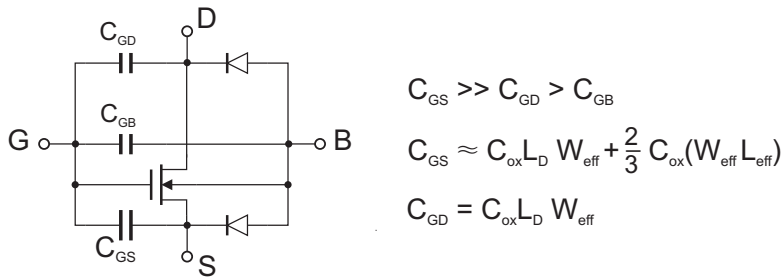$$r_o \triangleq \left.\frac{\partial v_{DS}}{\partial i_D}\right|_{v_{GS}=const.} = \frac{1}{\lambda i_D}.$$

- pag. 10: replace Fig. 1.18 with the following

- pag. 11: replace Fig. 1.19 with the following

- pag. 13: replace Fig. 1.23 with the following

$$C_{GS} \gg C_{GD} > C_{GB}$$

$$C_{GS} \approx C_{ox} L_D W_{eff} + \frac{2}{3} C_{ox}(W_{eff} L_{eff})$$
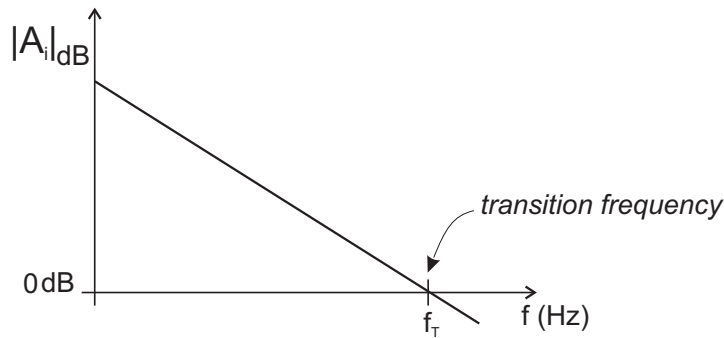
$$C_{GD} = C_{ox} L_D W_{eff}$$

- pag. 18: replace the first expression with

$$r_o^{-1} \triangleq \left. \frac{\partial i_D}{\partial v_{DS}} \right|_{v_{GS}=const.} = \frac{\partial}{\partial v_{DS}} \left[\mu_n \frac{C_{ox}}{2} \frac{W}{L} (V_{OD})^2 (1 + \lambda v_{DS}) \right]$$

$$= \mu_n \frac{C_{ox}}{2} \frac{W}{L} (V_{OD})^2 (\lambda) \approx \lambda i_D$$

$$r_o = \frac{1}{\lambda i_D}.$$

- pag.22: Fig. 1.35 should be replaced with

$$|A_i|_{dB}$$

- pag. 44: the following expressions

$$p_1^m = \frac{1}{R_S(C_M + C_{gs})}$$

and

$$p_2^m = \frac{1}{R_D(C_{db} + C_{gd})}.$$

should be replaced with

$$p_1^m = -\frac{1}{R_S(C_M + C_{gs})}$$

and

$$p_2^m = -\frac{1}{R_D(C_{db} + C_{gd})}.$$

- pag. 45: the following expression

$$\frac{v_o}{v_s} = -g_m R_D \frac{\left(1 - \frac{s}{z}\right)}{\left(1 - \frac{s}{p_1}\right)\left(1 - \frac{s}{p_2}\right)},$$

should be replaced with

$$\frac{v_o}{v_s} = -g_m R_D \frac{\left(1 - \frac{s}{z}\right)}{\left(1 + \frac{s}{p_1}\right)\left(1 + \frac{s}{p_2}\right)},$$

- pag. 45: the following expression

$$p_2 \approx -\frac{1}{R_D(C_{gd} + C_{db})}. \qquad (p_2 \neq p_2^m)$$

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should be replaced with

$$p_2 = \frac{1}{p_1} \frac{1}{R_S R_D (C_{gs} C_{gd} + C_{gs} C_{db} + C_{gd} C_{db})}. \qquad (p_2 \neq p_2^m)$$

- pag. 50: the following expression

$$Z_{out} \approx r_o \| R_D \| \left(\frac{1}{1 + s(C_{gd} + C_{db})} \right).$$
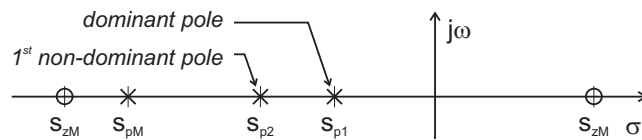
should be replaced with

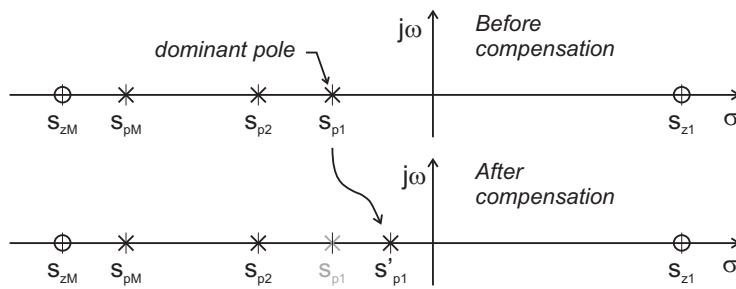$$Z_{out} \approx r_o \| R_D \| \left(\frac{1}{s(C_{gd} + C_{db})} \right).$$

- pag. 166 the expressions just above Fig. 6.41 should be replaced with

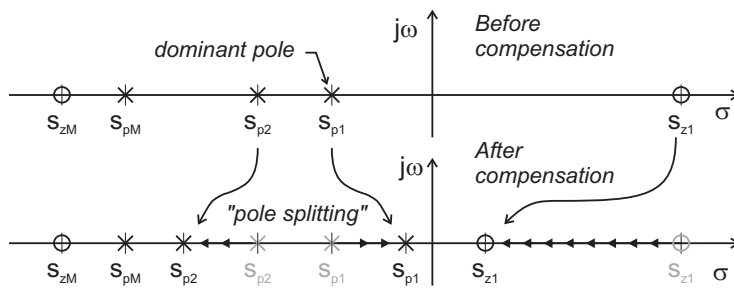$$s_z = -\frac{2g_{m3}}{C_M}, \qquad s_p = -\frac{g_{m3}}{C_M}.$$

- Fig. 6.43 has to be replaced with

- Fig. 6.55 has to be replaced with

- Fig. 6.59 has to be replaced with

- Fig. 6.66 has to be replaced with